UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,999	02/25/2004	Takeshi Ido	501.43526X00	9768

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EXAMINER
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ART UNIT	PAPER NUMBER
2185	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 November 2005</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2,5,6,9-11,14,15 and 17</u> is/are rejected.

7)☒ Claim(s) <u>3,4,7,8,12,13 and 16</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/25/04;8/30/05</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-17 are presented for examination.

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 17, it is unclear whether "said memory" referred to "a memory", claim 14, line 5 or "a memory" claim 17, line 5.

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-2, 5-6, 9-11, and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kodama et al., US 2004/0254964 A1 (hereinafter Kodama).

As per claim 1, Kodama teaches a storage system comprising:

a first storage unit for storing information from a first server (e.g., fig. 1, primary storage 122a, server 111; fig. Fig. 5, primary volume 522a, servers 501; fig. 8, original volume 822a, servers 801a);

a second storage unit for storing the information stored in said first storage unit (e.g., fig. 1, secondary storage 123; fig. 5, secondary volume 523a; fig. 8, copied volume 823a);

a storage controller being coupled with said first storage unit, said second storage unit, said first server, and a second server, and being used to control said fist storage unit and said second storage unit (e.g., fig. 1, array controller 121, servers 101; fig. 5, array manager 502a, servers 501; fig. 8, array manager 802a, servers 801a);

wherein when an instruction for splitting is received from said first server (e.g., fig. 9, p-split 904, fig.12, p-split; [0072], [0103]) said storage controller reports end of the splitting to said first server (e.g., fig.12, el.1202), receives an instruction for backup from said second server (e.g., [0009], [0073]-[0074], [0105]-[0106]) and then transfers information to a backup device from said second storage unit after copy of information from said first storage unit to said second storage unit ends (e.g., [0009], [0073]-[0074], [0105]-[0106]).

As per claim 5, Kodama teaches a backup method for a storage system having a first storage unit for storing information from a first server (e.g., fig. 1, primary storage 122a, server 111; fig. Fig. 5, primary volume 522a, servers 501; fig. 8, original volume

822a, servers 801a), a second storage unit for storing the information stored in said first

storage unit (e.g., fig. 1, secondary storage 123; fig. 5, secondary volume 523a; fig. 8,

copied volume 823a), and a storage controller being coupled with said first storage unit,

said second storage unit, said first server, and a second server, and being used to

control said fist storage unit and said second storage unit (e.g., fig. 1, array controller

121, servers 101; fig. 5, array manager 502a, servers 501; fig. 8, array manager 802a,

servers 801a), wherein said method comprising the steps of:

causing said first server to issue an instruction for splitting to said storage

controller (e.g., fig. 9, p-split 904, fig.12, p-split; [0072], [0103]);

then causing said storage controller to report end of the splitting to said first

server (e.g., fig.12, el.1202); and

then, when an instruction for backup is received from said second server,

transferring information from said second storage unit to a backup device after end of

copy of the information from said first storage unit to said second storage unit (e.g.,

[0009], [0073]-[0074], [0105]-[0106]).

As per claim 9, Kodama teaches a backup system comprising:

servers for storing information (e.g., fig. 1, servers 101; fig. Fig. 5, servers 501;

fig. 8, servers 801a);

a first storage unit for storing information from said servers (e.g., fig. 1, primary

storage 122a, server 111; fig. Fig. 5, primary volume 522a, servers 501; fig. 8, original

volume 822a, servers 801a);

a second storage unit for copying the information stored in said first storage unit (e.g., fig. 1, secondary storage 123; fig. 5, secondary volume 523a; fig. 8, copied volume 823a); and

a storage controller connected with said servers, said first storage unit, and said second storage unit and controlling said first and second storage units (e.g., fig. 1, array controller 121, servers 101; fig. 5, array manager 502a, servers 501; fig. 8, array manager 802a, servers 801a);

wherein when said storage controller receives an instruction for splitting from said servers (e.g., fig. 9, p-split 904, fig.12, p-split; [0072], [0103]), end of splitting is reported to said servers (e.g., fig.12, el.1202), an instruction for backup is received from said servers, then information is copied from said first storage unit into said second storage unit, and after the end thereof the information is transferred from said second storage unit to the backup device (e.g., [0009], [0073]-[0074], [0105]-[0106]).

As per claim 14, Kodama teaches a storage system comprising storage units (e.g., fig. 1, primary storage 122a, server 111; fig. Fig. 5, primary volume 522a, servers 501; fig. 8, original volume 822a, servers 801a; fig. 1, secondary storage 123; fig. 5, secondary volume 523a; fig. 8, copied volume 823a) and a storage controller for controlling said storage units (e.g., fig. 1, array controller 121, servers 101; fig. 2, els. 211a-c; fig. 4, el. 403; fig. 5, array manager 502a, servers 501; fig. 8, array manager 802a, servers 801a [0114]);

wherein said storage units include first and second storage units (e.g., fig. 1,

primary storage 122a, server 111; fig. Fig. 5, primary volume 522a, servers 501; fig. 8,

original volume 822a, servers 801a; fig. 1, secondary storage 123; fig. 5, secondary

volume 523a; fig. 8, copied volume 823a); and wherein said storage controller has

(a) a memory (e.g., fig. 4, el. 405; a cache memory [0089]; fig. 7, el. 702, 704)

(b) a first control portion connected with said memory, accepting splitting

processing sent from a first server, and reporting end of splitting to said first server (e.g.,

fig. 4, el. 431, fig. 5, el. 502c; fig. 9, p-split 904, fig.12, p-split; [0072], [0103])), (c) a

second control portion connected with said memory and accepting backup processing

sent from a second server after said report of end of the splitting (e.g., fig. 4, el. 432; fig.

5, el. 502c; [0009], [0073]-[0074], [0105]-[0106]), (d) a third control portion connected

with said storage units and with said memory and acting to copy information from said

first storage unit to said second storage unit (e.g., fig. 2, el. 211a, fig. 4, el. 435; fig. 5,

el. 521a; [0073], [0103]) and (e) a fourth control portion connected with said memory

and accepting said backup processing, said fourth control portion transferring

information from said second storage unit to a backup device after end of copy of

information from said first storage unit to said second storage unit (e.g., fig. 2, el. 211b,

fig. 4, el. 435; fig. 5, el. 521b.; [0082] [0114] [0009], [0073]-[0074], [0105]-[0106]).

As per claims 2, 6, 10-11, 15, Kodama teaches wherein information is transferred

from said second storage unit to said backup device after copy of all information from

said first storage unit to said second storage unit ends (e.g. [0076]; [0009], [0073]-

[0074], [0105]-[0106]); wherein when there is a request from said second server for

transfer of information stored in said second storage unit to the backup device, the

information is transferred to said backup device from said second storage unit after end

of copy of the whole information into said second storage unit from said first storage unit

(e.g. [0076]; [0009], [0073]-[0074], [0105]-[0106]); wherein said servers have a first

server for issuing the instruction for splitting and a second server for issuing the

instruction for backup (e.g., fig. 9, p-split 904, fig.12, p-split; [0072], [0103]; [0009],

[0073]-[0074], [0105]-[0106]);

6.   Claims 3-4, 7-8, 12-13, and 16 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

7.   Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35

U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the

limitations of the base claim and any intervening claims.

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

        a)   Kobayashi et al. (US6886086) shows a data backup

storage and method with a backup instruction;

     b)   Kodama et al. (US 2004/0254962 A1) shows backup system having

servers;

     c)   Mizuno et al. (US 6880059) shows a backup system.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Denise Tran whose telephone number is (571) 272-

4189. The examiner can normally be reached on Monday, Thursday, and an alternate

Friday from 8:45 a.m. to 5:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matt Kim, can be reached on 572-272-4182. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Denise Tran

12/08/05